LOAN ANALYZER

CREATIVE
SOFTWARE

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OVERVIEW

        Loan Analyzer is a single program which runs in any Atari
400/800 computer with a minimum of 16K RAM. It is available on
either cassette or diskette (the diskette version requires enough
extra RAM to run the DOS). The program allows you to calculate
monthly payments, the term of a loan, the maximum amount you can
borrow, or the loan's annual percentage rate.   In order to
calculate any of these numbers, you'll need to supply it with the
other three.

        Once you've settled on a particular loan you can calculate
and display an Amortization Table. This table shows you how much
the loan is costing on a monthly basis.   It will calculate the
interest on each payment, the total interest paid to date, the
principal amount of each payment, and the remaining balance of the
loan. In addition, if you have a properly interfaced 80-column
printer, you can print this table for any range of payments.

A SHORT DISCUSSION OF LOANS

        The program handles calculations for certain specific types
of loans. The payments are assumed to be made once per month (12
times per year). The annual percentage rate can be anywhere
between .01% and 99.99%; if your interest rate is larger than
this, your loan shark will probably repossess your Atari if you
fall behind. If your interest rate is smaller than this, you have
what is called an "interest free loan" and really shouldn't care
what the interest is.

        The term of the loan can be from 1 to 999 months.   If the
term of the loan is in weeks or years, you'll have to convert it
to months before entering it into the program.

        Finally, the program calculates loan figures for "fully
amortized loans" only. This means that, in order to calculate
either the principal, monthly payment, term or interest rate, it
assumes you will be completely paying off the loan in the
specified term.

        If you have a partially amortized loan (one with a balloon
payment at the end) you can still calculate an amortization table
for the loan. The Loan Balance at the end of the term will
represent your balloon payment (or the unpaid balance of the
loan).

LOADING INSTRUCTIONS - CASSETTE

To load the program, first place the tape in the cassette unit. Rewind the tape completely, and then type CLOAD and press the RETURN key. The Atari will beep once; press the PLAY button on the tape recorder and then press the RETURN key. The computer will load the program. After the program is done loading, the Atari displays READY. Type RUN and press RETURN.

If you should get an error while loading, the computer will stop and display an error message. You should rewind the tape and repeat the above procedure. If Loan Analyzer keeps failing to load properly, you may have your cassette unit located too close to your TV; try moving the cassette unit away from the TV and start the load procedure again. If this doesn't work, you may have an out-of-alignment cassette unit. Take the cassette unit and tape to your Atari dealer and have him check the unit.

In the unlikely event that the Loan Analyzer tape is bad, return it to your local dealer or return it to Creative Software and it will be replaced free of charge.

LOADING INSTRUCTIONS - DISK

To load the program from disk, be sure that the disk drive is connected and turned on, and the Basic Language cartridge is in place. Place the Loan Analyzer diskette in the disk drive, and turn on the computer. After the message READY appears, type LOAD "D:LOANS" and press RETURN. After the program has finished loading, type RUN and press RETURN.

If you should get a load error, try turning off the entire system and repeating the above procedure. If the program still fails to load properly, return the diskette to your dealer or Creative Software, and it will be replaced free of charge.

        When the program is first   run, a (very brief) copyright
message is flashed and the screen displays the following:

YOU CAN:

1. ENTER/CALCULATE LOAN FIGURES

2. DISPLAY/PRINT AMORTIZATION TABLE

3. END PROGRAM

ENTER NUMBER OF OPTION DESIRED:

        The screen display illustrated above is called a "menu" (for
obvious reasons).   To select the option you wish, you simply   type
the number (1 through 3) and press the RETURN key. Note   that   if
you try to type a two digit number, only the first digit appears.

        Even more interestingly, try typing in a number bigger   than
3, or even a letter, and then pressing RETURN. At the bottom   of
the screen the following message appears:

                        ILLEGAL ENTRY
                   PRESS RETURN TO CONTINUE

In this way, the program guards against improper entries.

        Options 1 and 2 operate quite differently, and are covered
below.   Option 3 simply ends the program and returns you to BASIC.
Since the program is still in memory, you can run it again without
loading it from tape or disk.

3.1 Calculating Loan Figures

        For fully amortized loans, paid on a monthly basis, you   can
calculate any one of four loan parameters: (1) the amount you   can
borrow (called the PRINCIPAL); (2)   the monthly payment on   the
loan; (3) the term of the loan, in months; and   (4)   the annual
percentage rate (APR). Of course, to calculate any of these   four
numbers, you'll have to supply the other three.

        There are some limitations, however.   The principal amount
must be less than $1,000,000.00; the monthly payment, less   than
$100,000.00; the term of the loan, less than 1000 months; and   the
APR must fall between .01 and 99.99. If any of the loan figures
falls outside these ranges, the program will detect this and   warn
you about it.   The main reason for placing these limits on   the
figures is that   the arithmetic accuracy of the computer   is
limited, and these ranges insure that the calculations   will   be
correct to the nearest $0.01.

        In order to familiarize you with the procedure used   to
calculate loan figures, we'll   take you step-by-step through   a

typical example. So we'll assume you've loaded the program, chosen option 1 in the menu, and are ready to calculate a monthly payment.

EXAMPLE 1: Calculating a monthly payment

    Suppose you're buying a boat. You need to borrow $10,000 to buy it, and the bank will give you a 5 year loan at 15% annual interest. You want to calculate the monthly payment in order to be sure the bank isn't overcharging you.

    When you chose option 1, you'll see this submenu:

ENTER/CALCULATE LOAN FIGURES

1. PRINCIPAL (HOW MUCH YOU CAN BORROW)

2. MONTHLY PAYMENTS

3. THE LOAN'S TERM

4. APR (ANNUAL PERCENTAGE RATE)

ENTER OPTION (0=EXIT)

Since we need to calculate the monthly payment, type 2 and press RETURN. The screen will be redisplayed as follows:

CALCULATE MONTHLY PAYMENT

1. PRINCIPAL AMOUNT

2. MONTHLY PAYMENT

3. TERM OF LOAN

4. INTEREST (APR)

The four numbered items are called "fields." The cursor is waiting immediately following the PRINCIPAL field. The program is asking you to enter the amount of the loan, so type 10000 (no dollar sign or commas) and press RETURN. The cursor moves to the term field. Type 60 (since 5 years = 60 months) and press RETURN. Finally, the cursor moves to the APR field; type 15 (without the % sign) and press RETURN. Very quickly the number 237.89 appears and flashes on the screen. Your monthly payment for this loan is 237.89.

    At the bottom of the screen the prompt: PRESS RETURN TO CONTINUE appears. This means that, if you're done examining these figures, you can go on to calculating other monthly payments.

    But what if you don't want to calculate any more monthly

payments? Easy - just press RETURN in response to any of the
other figures needed (i.e., PRINCIPAL, TERM, or APR). You're
instantly returned to the "submenu" to try a different
calculation.

EXAMPLE 2: Calculating an annual percentage rate.

        Suppose you're buying a car. The auto dealer tells you that
the loan is for five years (60 months), the payments are 175.86
per month, and the car has a sticker price of $5600.00. You want
to know what the annual interest rate is on this loan. This is
option 4 in the submenu, so type 4 and press RETURN.

        The program will ask you for the first three figures, namely
the principal (type 5600 and press RETURN), the monthly payment
(type in 175.86 and press RETURN), and the term (enter 60 and
press RETURN). After a few seconds the number 28.44 is flashed on
the screen (this dealer is no friend of yours!)

        Rather than going through more specific examples here, you
should read the rest of section 3.1 and try a lot of examples for
yourself. The next sections tell you how to recover from typing
errors and why the Atari will sometimes refuse to calculate
certain loan figures.

RECOVERING FROM TYPING ERRORS

        You may have already noticed that when the program is
running, most of the cursor control keys (up, down, right and
left) and the INSERT key no longer function. As a matter of fact,
the program will only let you correct a mistake by using the BACK
S (backspace) key.

        If you make a mistake, use the BACK S key to erase all the
characters back to the point you made a mistake. Then reenter the
information correctly. Notice that an underline is always
displayed when you are entering data, with the cursor at the first
position of the underline. This underline indicates the maximum
number of characters you can enter on that line. If you try to
type in any more, the program just refuses to take them.

        Further, if you try to erase more characters than you
entered, the program stops you at the beginning. You're only
allowed to enter the correct data in the correct locations.

OTHER POSSIBLE ERRORS

        Try the following experiment: choose option 3 (calculating
the loan's term) and enter the following amounts:

PRINCIPAL: 100000
MONTHLY PMT: 100
ANNUAL %: 15

The message "Your payment is too low for this loan amount and
interest" appears in the middle of the screen. This means exactly
what it says — you can't borrow $100,000 at 15% interest with a
payment of $100 per month, no matter how long you try to pay it!

        Now return to the submenu and choose option 2. Enter the
following amounts:

PRINCIPAL: 999999.00
TERM: 5
APR: 25

Although the amount 99999.99 appears in the MONTHLY PMT line, the
Atari displays OVERFLOW ERROR at the bottom of the screen. This
means that the amount to be calculated (in this case, the monthly
payment) was larger than the maximum amount allowed. In reality,
a $999,999.00 loan at 25% for five months will cost you well over
$100,000 per month. The program will not calculate monthly
payments that high.

It is possible to get overflow errors for the monthly payments,
the loan amount, and the annual percentage rate. However, unless
you're trying to do this on purpose, you probably will never run
into these problems.

3.2   Saving the Loan Figures for Use in Amortization Tables

        When you've come up with loan figures that you're satisfied
with, you'll probably want to use option 2 in the main menu to
display an amortization table. This is easy to do, since the
CALCULATE LOAN FIGURES option always remembers the most recent
loan figures you entered, even though you have returned to the
main menu. So, when you're done with the calculations, just press
the RETURN key twice to exit this option, and the main menu will
be redisplayed with the loan figures still intact.

3.3   Displaying or Printing an Amortization Table

        From the main menu, type 2 and press RETURN. This part
starts by displaying the current loan figures with the following
screen:

DISPLAY/PRINT AMORTIZATION TABLE

1. PRINCIPAL AMOUNT
2. MONTHLY PAYMENT
3. TERM OF LOAN
4. INTEREST (APR)

ARE THESE LOAN FIGURES OK?

(0=YES, 1=CHANGE, 2=EXIT TO MENU)

If you've previously used option 1 to calculate the loan figures,
the above four fields will already contain some numbers. However,
if you choose this option when the program first starts, you'll
have to enter some valid loan figures in order to proceed further.

CHANGING CURRENT LOAN FIGURES

     You can change the displayed loan figures before getting an
amortization table. (You'll have to do this first if you haven't
previously entered any loan figures.) Since entering loan figures
in this case is a little different from the way you previously did
it, we'll go through an example step-by-step. Start by typing 1
and pressing RETURN, and then follow these steps:

YOU TYPE IN:	THE PROGRAM RESPONDS BY:
1 and press RETURN	moving the cursor to the PRINCIPAL field
38400 and press RETURN	placing the number 38400.00 in the PRINCIPAL field
2 and press RETURN	moving the cursor to the MONTHLY PMT field
316 and press RETURN	placing the number 316.00 in the MONTHLY PMT field
3 and press RETURN	moving the cursor to the TERM field
360 and press RETURN	placing 360 in the TERM field
4 and press RETURN	moving the cursor to the APR field
9.25 and press RETURN	placing 9.25 in the APR field

Finally, type 0 and press RETURN. The program will now redisplay
the entire screen and again prompt you with:

ARE THESE LOAN FIGURES OK?

(0=YES, 1=CHANGE, 2=EXIT TO MENU)

Since you've just finished entering all the fields you need, type
0 and press RETURN. Note that if you ever need to change the loan
figures, you can change only the ones you wish; you don't have to
reenter all four fields every time.

3.4 DISPLAYING AN AMORTIZATION TABLE

     Using the sample amounts we've just entered, let's try
displaying an amortization table for payment numbers 1 through 12.
If you've followed the instructions correctly, the screen should
look like:

DISPLAY/PRINT AMORTIZATION TABLE

1. PRINCIPAL AMOUNT   38400.00
2. MONTHLY PAYMENT   316.00
3. TERM OF LOAN   360
4. INTEREST (APR)   9.25

START: END:

and the cursor will be waiting after the word START.   These are
the starting and ending payment numbers for which we want the
table listed.   Type a 1 and press RETURN. The cursor now follows
the word END.   Type 12 and press RETURN.

     At the bottom of the screen, the program asks: SCREEN (0) OR
PRINTER (1) (2=EXIT). If you want the amortization table listed
to the screen, type 0 and press RETURN. To have it listed to the
printer, type 1 and press RETURN. If you've changed your mind and
don't want to see an amortization table at all, type 2 and press
RETURN.

       In our example, we'll list the amortization table to the
screen.   Type 0 and press RETURN; immediately below the START and
END payment numbers the program displays:

FOR PAYMENT NUMBERS 1 THROUGH 6

CURRENT	TOTAL	PMT TO	LOAN
INTEREST	INTEREST	PRINC.	BALANCE
296.00	296.00	20.00	38380.00
295.85	591.85	20.15	38359.85
295.69	887.54	20.31	38339.54
295.53	1183.07	20.47	38319.07
295.38	1478.45	20.62	38298.45
295.22	1773.67	20.78	38277.67

     PRESS 'e' TO END

The four numbers being displayed on each line are, from left to
right:

1. The current interest due with this payment
2. The total interest paid through and including this payment
3. The amount of the payment which goes to reducing the principal
4. The balance of the loan still due after this payment

     To continue with the table press RETURN; pressing "e" ends

the table immediately. When the table is complete, the prompt:

TABLE COMPLETE
PRESS RETURN TO CONTINUE

appears at the bottom of the screen. By pressing RETURN, you'll
be able to enter new starting and ending payment numbers for the
amortization table.

When you're all done listing this loan's amortization table,
just press RETURN when the cursor is at the START field, and
you'll be able to enter new loan figures and start the procedure
all over again. If you want to exit this option and return to the
main menu, type a 2 and press RETURN when the program asks you:
ARE THESE LOAN FIGURES OK?

OTHER FEATURES OF OPTION 2

Option 2 always lets you start and end at any payment (unless
the end payment is less than the start payment). However, if you
are starting at a very large number, (for example try starting the
table at payment 350 and ending at 350), the the program will take
a long time to calculate the necessary number (about 45 seconds in
this case). The numbers will flip by on the screen until they
reach the beginning payment you want.

Also, if you enter a START number larger than the number of
payments necessary to pay off the loan, the program won't display
anything in the table.

Finally, the program will check for improper loan figures,
such as those mentioned on page 6 of this manual. Although you'll
be able to enter incorrect figures, if you try to run option 2,
you'll get an INVALID LOAN FIGURES message at the bottom of the
screen and you won't be able to go any further until you correct
the loan figures.

3.5 Printing an Amortization Table

If you have an 80-column printer, properly interfaced to your
computer, you can get a printout of the amortization table.   You
make this choice after you've entered the starting and ending
payment numbers for the table (see section 3.4).   Simply type 1
(instead of 0) when asked: SCREEN (0) OR PRINTER (1) (2=EXIT).
The program will automatically list the amortization table to the
printer.

If your printer isn't hooked up or initialized properly,
you'll get a PRINTER NOT HOOKED UP error message. You may have to
turn your printer off and on again, or you may even have to exit
the Loan Analyzer program completely and run it again from scratch
in order to have the printer re-initialized correctly.

PRINCIPAL: 38400.00 MONTHLY PAYMENT: 316.00 TERM: 360 MONTHS   APR: 9.25%

PMT#	CURRENT INTEREST	TOTAL INTEREST	PMT TO PRINCIPAL	TOTAL PAYMENTS	LOAN BALANCE
1	296.00	296.00	20.00	316.00	38380.00
2	295.85	591.85	20.15	632.00	38359.85
3	295.69	887.54	20.31	948.00	38339.54
4	295.53	1183.07	20.47	1264.00	38319.07
5	295.38	1478.45	20.62	1580.00	38298.45
6	295.22	1773.67	20.78	1896.00	38277.67
7	295.06	2068.73	20.94	2212.00	38256.73
8	294.90	2363.63	21.10	2528.00	38235.63
9	294.73	2658.36	21.27	2844.00	38214.36
10	294.57	2952.93	21.43	3160.00	38192.93
11	294.40	3247.33	21.60	3476.00	38171.33
12	294.24	3541.57	21.76	3792.00	38149.57
13	294.07	3835.64	21.93	4108.00	38127.64
14	293.90	4129.54	22.10	4424.00	38105.54
15	293.73	4423.27	22.27	4740.00	38083.27
16	293.56	4716.83	22.44	5056.00	38060.83
17	293.39	5010.22	22.61	5372.00	38038.22
18	293.21	5303.43	22.79	5688.00	38015.43
19	293.04	5596.47	22.96	6004.00	37992.47
20	292.86	5889.33	23.14	6320.00	37969.33
21	292.68	6182.01	23.32	6636.00	37946.01
22	292.50	6474.51	23.50	6952.00	37922.51
23	292.32	6766.83	23.68	7268.00	37898.83
24	292.14	7058.97	23.86	7584.00	37874.97
25	291.95	7350.92	24.05	7900.00	37850.92
26	291.77	7642.69	24.23	8216.00	37826.69
27	291.58	7934.27	24.42	8532.00	37802.27
28	291.39	8225.66	24.61	8848.00	37777.66
29	291.20	8516.86	24.80	9164.00	37752.86
30	291.01	8807.87	24.99	9480.00	37727.87
31	290.82	9098.69	25.18	9796.00	37702.69
32	290.62	9389.31	25.38	10112.00	37677.31
33	290.43	9679.74	25.57	10428.00	37651.74
34	290.23	9969.97	25.77	10744.00	37625.97
35	290.03	10260.00	25.97	11060.00	37600.00
36	289.83	10549.83	26.17	11376.00	37573.83
37	289.63	10839.46	26.37	11692.00	37547.46
38	289.43	11128.89	26.57	12008.00	37520.89
39	289.22	11418.11	26.78	12324.00	37494.11
40	289.02	11707.13	26.98	12640.00	37467.13
41	288.81	11995.94	27.19	12956.00	37439.94
42	288.60	12284.54	27.40	13272.00	37412.54
43	288.39	12572.93	27.61	13588.00	37384.93
44	288.18	12861.11	27.82	13904.00	37357.11
45	287.96	13149.07	28.04	14220.00	37329.07
46	287.74	13436.81	28.26	14536.00	37300.81
47	287.53	13724.34	28.47	14852.00	37272.34
48	287.31	14011.65	28.69	15168.00	37243.65
49	287.09	14298.74	28.91	15484.00	37214.74
50	286.86	14585.60	29.14	15800.00	37185.60
51	286.64	14872.24	29.36	16116.00	37156.24
52	286.41	15158.65	29.59	16432.00	37126.65
53	286.18	15444.83	29.82	16748.00	37096.83
54	285.95	15730.78	30.05	17064.00	37066.78

LOAN ANALYZER
ATARI 400/800

LOAN ANALYZER is one of many Creative Software home-utility programs designed to turn your computer into a truly useful household tool.

What the Program Does

Comparing and contrasting the complicated terms of a loan is the sort of job for which your computer is perfectly suited. Using the Creative Software **LOAN ANALYZER** programs, you can enter and manipulate four loan parameters to see what terms best suit your needs and budget. The programs will also calculate and produce an amortization table, enabling you to see at a glance how much your loan is costing per month, how much of your payment is going toward repayment of principal, and how much is going to interest.

What You Do

Inform the computer of the terms of your loan

- Monthly payments
- Length of the loan
- Amount of the loan
- Annual percentage rate

The Results

Amortization table showing

- Payment number
- Interest being paid, this payment
- Total interest paid to date
- Payment to principle, this payment
- Balance still due

Programs from Creative Software
Easy. Efficient. Informative

CREATIVE SOFTWARE